means for detecting a presence of stored data to be transmitted to the base station transceiver;

means for generating a request message from the subscriber transceiver to the base station transceiver for an assignment of one or multiple traffic channels; and

means for assigning traffic channels for use by the subscriber transceiver to transmit the data payload to the target transceiver in response to receiving the request message from the subscriber transceiver.

49. (New) A method as in claim 1 further comprising:

maintaining an idle mode between a remote transceiver and a base station by sending timing information over a low-bandwidth non-traffic channel.

REMARKS

Previously, claims 1-35 were pending in the present application. Claims 36-49 are being added and claims 13-35 are being cancelled by way of this Amendment. After entry of this Amendment, claims 1-12 and 36-49 will be pending.

The title of the application has been amended as shown above to address the Examiner's concern about the original title potentially being non-descriptive.

Applicants have amended claims 1-12 to expedite prosecution of the present application. Submission of these amendments should not be interpreted as acquiescing to the Examiner's rejection.

The following remarks address the rejections of claims 1-12 as set out by Examiner in this Office Action and patentability of newly added claims 36-49.

Information Disclosure Statement

An Information Disclosure Statement (IDS) is being filed with this Amendment. Entry of the IDS and review of the prior art is respectfully requested.

Summary

One aspect of the present invention is directed towards achieving higher data rates based on more efficient allocation of CDMA (Code Division Multiple Access) wireless channels. Instantaneous bandwidth needs of an on-line subscriber unit can be met by dynamically allocating one or more multiple traffic channels on an as needed basis for each session. For example, multiple traffic channels can be granted during times when the subscriber bandwidth requirements are relatively high, such as when downloading web page information. Conversely, traffic channels can be released during times when the line content is relatively light, such as when the subscriber is reading a web page that was previously downloaded. An idle connection can be maintained with a subscriber unit in which no traffic channels are allocated for data payload transfers.

According to the principles of the present invention, the method of maintaining traffic channels can include allocation and deallocation of traffic channels based upon request messages received at a base station transceiver from a remote transceiver. For example, while in an idle mode when no traffic-type channels are assigned for use to transmit payload data information to a base station transceiver, the remote transceiver can receive at least part of a data payload from a computer device. Typically, the data payload is expected to be transmitted over the wireless link to the base station transceiver. Following detection of the presence of the data payload, the remote transceiver generates and transmits a request message to the base station transceiver for an assignment of one or multiple traffic channels to transmit the data payload. In response to receiving the request message from the remote transceiver, the base station transceiver can assign one or more traffic channels for use by the remote transceiver to transmit the data payload to the base station transceiver over the wireless link.

Once traffic channels are allocated for use and the data is transmitted to a target, the remote transceiver can transmit a release message to the base station transceiver indicating that previously assigned traffic channels are no longer needed to transmit information to the base station transceiver. In response to receiving this release message at the base station transceiver, the base station can deallocate use of the traffic channels so they can be reassigned for use by another remote terminal attempting to transmit data information to the base station.

This method of allocating traffic channels and transmitting data payload information is advantageous because traffic channels can be assigned for use when a data payload is present for transmission to a target device instead of needlessly being continuously assigned to a wireless device that is not transmitting data information.

Cited References

Tiedemann, *et al.*, (U.S. Patent 5,987,326) discloses a system of reducing power output levels while performing soft hand-offs in a wireless communication system.

Rejections of Claims 1-5

The Examiner has rejected claim 1 under 35 U.S.C. § 102(e) based on the teachings of Tiedemann, *et al.*, (U.S. Patent 5,987,326).

It is well accepted that a claim is not anticipated under 35 U.S.C. § 102 unless each and every aspect of the claimed invention is taught by a single reference. Accordingly, it is respectfully submitted that the invention as recited in amended claim 1 is not anticipated because it includes distinguishing limitations not taught or suggested by any of the cited references. In fact, even the combination of cited reference does not teach every limitation of the claimed invention.

For example, claim 1 recites that while the subscriber transceiver is in an idle mode, no traffic channels are assigned for use by the subscriber unit to transmit data information to a base station. An idle connection is maintained without an allocation of traffic channels until payload data is detected for transmission from a subscriber transceiver to the base station. A message can be generated by the subscriber transceiver for request of traffic channels to transmit the payload data. Support for the amendment to Claim 1 can be found at page 4, lines 5-15 and page 4, lines 22-28 and elsewhere throughout Applicants' specification and corresponding figures. This aspect of the claimed invention is not taught or suggested by any of the cited references.

Tiedemann discloses communication of information in a wireless system. However, there is no teaching or suggestion in the cited reference to maintain an idle mode between a remote transceiver and a base station, especially a connection that does not include the allocation of a traffic-type channel to transmit data payload information as in the claimed invention.

Instead, Tiedemann discloses a technique supporting the continuous allocation of traffic-type channels to transmit and receive traffic data such as data payload information.

More specifically, Tiedemann '326 describes a wireless communication system in which data traffic is supported over a single, continuously assigned fundamental channel on a forward link based on the IS-95 standard (column 6, lines 17-25). This fundamental channel is used to support both signaling data and traffic data (column 6, lines 27-35). Tiedemann discloses that supplemental traffic channels can be allocated in addition to the fundamental channel to increase a forward link transfer capacity (column 6, lines 27-35). In a reverse link, a "single low rate channel" is continuously assigned for transmission of traffic data from a subscriber unit to the base station. A user assigned continuous forward and reverse link traffic channels as in Tiedemann can therefore communicate traffic data to a target transceiver at least a minimal basic rate over a corresponding continuously assigned channel. This technique in the prior art can result in inefficient use of bandwidth because a data channel for carrying payload information is assigned to a subscriber unit even though the subscriber unit is not transmitting data traffic information. Thus, according to the technique described in Tiedemann '326, at least one channel for carrying traffic data is continuously assigned for transmitting in each of the forward and reverse links regardless of whether they are used to transmit traffic data. Note that the IS-95 standard recites a standard in which at least one traffic channel is continuously assigned for use by a transceiver.

In contradistinction, the invention as recited in claim 1 maintains an idle connection without allocation of any traffic channels to transmit a data payload. When a data payload intended for transmission to the base station is detected, a request message is sent from the remote transceiver to the base station for the allocation of traffic channels. Thus, according to the present invention, traffic-type channels are not needlessly assigned to a particular subscriber unit when it is in an idle mode. According to the claimed invention, bandwidth such as the continuously assigned but unused channels as disclosed by Tiedemann can be used for other purposes. This aspect of the claimed invention nor its advantages of supporting more efficient data communications with limited wireless resources are taught by any of the references.

Thus, it is submitted that claim 1 is novel and non-obvious as it incorporates advantageous techniques contrary to previously accepted wisdom and blueprints of the inventive

apparatus can not be found in the individual or combined cited references. Accordingly, it is submitted that independent claim 1 is in condition for allowance over the prior art.

Claims 2-5 depend from claim 1 and therefore should also be in condition for allowance. Further examination and reconsideration of the rejection of claim 1 and corresponding dependent claims 2-5 is respectfully requested.

Newly submitted claim 49 further distinguishes the claimed invention over the prior art because it includes the limitation of maintaining an idle mode between a remote transceiver and a base station by sending timing information over a low-bandwidth non-traffic channel. This aspect of the present invention ensures that minimal resources are used to maintain the idle connection during which no traffic channels are assigned for use. Consequently, the unused wireless resources can instead be assigned for use by other wireless devices to transmit traffic data. None of the references teach or suggest using a low-bandwidth non-traffic channel to maintain an idle link between a base station and remote transceiver device. Thus, it is respectfully submitted that claim 49 is also neither anticipated or obvious in light of the prior art. Consideration and allowance of the claimed invention is also respectfully requested.

Rejections of Claims 6-12

The Examiner has also rejected claim 6 under 35 U.S.C. § 102(e) based on the teachings of Tiedemann, *et al.*, (U.S. Patent 5,987,326).

As mentioned above, it is well accepted that a claim is not anticipated under 35 U.S.C. § 102 unless each and every aspect of the claimed invention is taught by a single reference. Accordingly, it is respectfully submitted that the invention as recited in amended claim 6 is also not anticipated because it includes distinguishing limitations not taught or suggested by any of the cited references. In fact, even the combination of cited reference does not teach every limitation of the claimed invention.

More specifically, claim 6 recites that after traffic channels are released from being assigned for use, an idle mode is maintained between a remote transceiver and a base station without an allocation of traffic channels to support data payload transfers. Claim 6 further recites that the idle mode is supported by sending timing information over a low-bandwidth non-traffic channel. Support for the amendment to Claim 6 can be found at page 4, lines 5-15, page 4, lines

22-28, and elsewhere throughout Applicants' specification and corresponding figures. As discussed, this aspect of the claimed invention is not taught or suggested by any of the cited references.

Tiedemann discloses communication of information in a wireless system. However, there is no teaching or suggestion in the cited reference to maintain an idle mode between a remote transceiver and a base station in which no traffic channels are allocated to transmit data payload information as in the claimed invention. Instead, Tiedemann discloses the continuous allocation of traffic-type channels to transmit and receive traffic data such as a data payload regardless of whether they are used at any given time to transmit traffic data.

In contradistinction, the invention as recited in claim 1 maintains an idle connection without allocation of any traffic channels after it is determined that a data payload has been transmitted. This claimed notion of releasing all traffic-type channels frees up resources so that they can be used by other wireless transceiver devices.

Additionally, unlike the prior art references, a message is generated by the remote transceiver indicating a request to release traffic channels after payload data is transmitted. This advantageous feature further distinguishes the claimed invention over the prior art and is also not taught or suggested by the cited references.

It is submitted in view of the above amendment and remarks that claim 6 is novel and non-obvious as it incorporates advantageous techniques contrary to previously accepted wisdom and blueprints of the inventive apparatus can not be found in the individual or combined cited references. Accordingly, it is submitted that independent claim 6 is in condition for allowance over the prior art.

Claims 7-12 depend from claim 6 and therefore should also be in condition for allowance. Further examination and reconsideration of the rejection of claim 6 and corresponding dependent claims 7-12 is respectfully requested.

Patentability of New Claims 36-48

Claim 36 recites a distinguishing feature as previously discussed for claim 1 and is therefore believed in condition for allowance. For example, claim 36 recites that a traffic channel assignment request message is generated by a remote transceiver while in an idle mode

when no traffic channels are assigned for use to transmit payload data information. None of the cited references teaches or suggests this aspect of the claimed invention. Consideration and allowance of claim 36 and corresponding dependent claims 37-43 is respectfully requested.

Claim 44 recites distinguishing features of sending a message to the base station for the release of previously allocated traffic channels. Claim 45 includes the distinguishing feature that the remote transceiver is placed in an idle mode during which no traffic channels are assigned for use. Consequently, wireless resources can be allocated to other transceiver devices to transmit data payload information. These distinctions and corresponding advantages are similar to those discussed above for claim 6 above. Consideration and allowance of claim 44 and corresponding dependent claims 45-47 is respectfully requested.

Claim 48 includes similar distinguishing features as similarly recited in the previously discussed claims. Allowance of claim 48 is also respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned Attorney at (978) 341-0036.

Respectfully submitted,

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MARKED UP VERSION OF AMENDMENTS

Claim Amendments Under 37 C.F.R. § 1.121(c)(1)(ii)

1. (Amended) A method for accessing data from a network via a wireless communication link, the method comprising the steps of:

[(a)] at a subscriber transceiver in an idle mode when no channels are allocated for sending payload data, determining whether at least a portion of payload data has been received from a computer device, the payload data intended to be transmitted over the wireless communication link [subscriber's terminal];

[(b)] in response to detecting a presence of the payload data, requesting use of [, based on said determining,] a first set of traffic channels by sending a traffic channel allocation request message, the first set of traffic channels including at least one traffic channel that the subscriber transceiver uses to transmit the payload data over the wireless communication link to a base station transceiver; and

[(c)] transmitting the payload data over the [requested] first set of traffic channels to the base station transceiver.

2. (Amended) The method of claim 1, wherein the [transmitted] payload data is transmitted via Code Division Multiple Access (CDMA) modulated radio signals.

3. (Amended) The method of claim 1, further comprising:

[(d)] transmitting a message to release [of] the first set of traffic channels after the payload data is transmitted.

4. (Amended) The method of claim 3, further comprising:

[(e)] receiving an assignment of a second set of traffic channels, the second set of traffic channels including at least one traffic channel; and

[(f)] receiving payload data over the second set of traffic channels.

5. (Amended) The method of claim 3, wherein the first set of traffic channels is released based upon a request message from the subscriber transceiver [said requesting is performed over a reverse control or non-traffic channel].

6. (Amended) A method for accessing data [of] from a computer network via a wireless communication link, the method comprising the steps of:

[(a)] constructing a first set of at least one traffic channels [, the set of traffic channels containing at least one traffic channel] to transmit a data payload from a remote transceiver to a base station;

[(b)] at the base station, receiving the data payload over the at least one traffic channels of the wireless communication link [, via the constructed first set of traffic channels, a request for a network address]; [and]

[(c)] [receiving] generating a message from the remote transceiver requesting a release of the first set of traffic channels after determining that the payload data has been transmitted to the base station; and

after the at least on traffic channels is released, maintaining an idle mode between a remote transceiver and a base station without an allocation of traffic channels to support data payload transfers, the idle mode being supported by sending timing information over a low-bandwidth non-traffic channel.

7. (Amended) The method of claim 6, wherein a request for information related to a network address is received over [a] Code Division Multiple Access (CDMA) modulated radio signals.

8. (Amended) The method of claim 6, further comprising the steps of:

[(d)] sending an assignment of a second set of at least one traffic channels [, the second set of traffic channels including at least one traffic channel]; and

[(e)] sending data associated with [the requested] a network address over the second plurality of traffic channels.

9. (Amended) The method of claim 1 [8], further comprising:

[(f)] receiving a request for additional [the first plurality of] traffic channels.

10. (Amended) The method of claim 8, wherein said sending an assignment of a second set of traffic channels is achieved by sending the message on [sent via] a forward control or non-traffic channel.

11. (Amended) The method of claim 9, wherein the [received] request for additional [the first plurality of] traffic channels is received over [via] a reverse control or non-traffic channel.

12. (Amended) The method of claim 9, wherein the request for additional [a first plurality of] traffic channels includes information including a [as to the size and] number of channels needed.